

# P5 Reflection

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## Graduation topic

The studio architectural engineering proposes the topic of an open building which can adapt to future needs. My graduation projects aim to develop a large-scale co-housing complex with adaptability as one of the core principles. By giving inhabitants the possibility but also the responsibility to decide how they arrange their house regarding both social interaction and the degree of sharing. Hereby they can influence the social character and sustainability of the building. The degree of sustainability relates mainly to material and energy consumption by making inhabitants choose how much space they occupy and with how many people they share by example a kitchen. This strongly relates to the topic of an open building.

## Research influence

The research aimed to find out if co-housing can indeed decrease loneliness among students while intensifying the use of space and research the willingness of students to share their space. A boardgame was developed to establish TU Delft students' attitudes towards co-housing, offering insights to inform the design of future housing compositions. The main question in this research was: How can the spatial, social, and emotional preferences of TU Delft students be systematically mapped to inform design decisions related to their loggings? The loggings from the research directly informed the design, making choices according to the outcome of the research. The design proposal is a co-housing complex where inhabitants again can play the game in real life making choices where borders should be placed and which functions, they want to share or not.

## Approach and Methodology

Both in the research and design phase a model making approach was sought after. For things to be in the physical world to be able to immediately reflect on it. In the research this was done with a boardgame to allow the respondents to play with their thoughts instead of clicking a button on a computer or phone. Developing the board game and implementing it among TU Delft students was by this way of working insightful by hearing the respondents reflect on their choices and hereby giving additional insight in their way of thinking surrounding their housing situation.

During the design phase making models was also a big part of the methodology. A critique on this approach also by my tutors was that it quickly becomes final instead of staying free. In my mind this is both true and false, to me making a model is a much more constructive way of creating and figuring out how the construction works. Therefore, it allows me think differently and come up with other solutions. But looking back this sometimes also closes doors to radically different solutions by the permanency of the object.

## **Academic and societal value**

My graduation work intends to create new ways of designing student houses to reduce the housing shortage and the increase in loneliness the past years. Both the mental health issues among students and housing shortage are pressing societal problems which needs to be addressed. Within the research a way scoping the perception of shared housing was developed in the form of a boardgame. This could be used to get insight into the perception of other interview groups of co-housing besides TU Delft students. The final project aims to marry a social concept with a highly technical project. The social adaptability within the project must be achieved with architectural solutions. Both the research paper and the final project hereby have academic and societal value by the novel approach.

## **Transferability of the project**

The project boasts an exceptionally high degree of adaptability, enabling inhabitants to customize their building. However, this level of adaptability poses significant demands on both the residents and the developers involved. The initial investment required is substantial, thus entailing considerable risk for developers. Nevertheless, I firmly believe in the fundamental values underlying this building concept, aspiring to a bold future where we embrace risk-taking to pioneer new housing typologies.

The findings from this research are directly applicable to the development of co-housing projects. Additionally, the board game could serve as a valuable tool to gauge the opinions of prospective inhabitants regarding a co-housing project. It offers insights into the diverse preferences concerning how the building should cater to social needs and preferences.

## **What was the biggest struggle of the project?**

To facilitate a highly adaptable building, a proposed solution involved implementing a modular system. Such an approach became necessary to enable the movement of objects and ensure the functionality of the system from a geometric standpoint. However, this design choice often results in projects conforming to a somewhat generic system. This contradicted the experiences I had while visiting co-housing projects during my research. The distinct quality of these homes was prominently evident in the presence of clutter, an aspect I regard with the utmost positivity. These houses felt truly alive, and it was this vibrancy that made them great.

The pursuit of adaptability often leads to a technically driven system, which stands in stark contrast to the cozy, lived-in environment of a cluttered co-house. This inherent contradiction posed a significant challenge for me. Balancing the technical demands necessary for the building's functionality consumed considerable time and attention, diverting focus from the intimate, small-scale design favorable to fostering clutter and interaction.

The adaptable aspect of a house should foster a sense of ownership, empowering individuals to truly feel like owners of their homes rather than mere passengers. It calls for assuming responsibility over one's material consumption, presenting inhabitants with choices they typically wouldn't have to confront due to the restricted degree of freedom within their houses.

However, translating this concept into reality proved challenging due to the continuous trade-off between the technical and social aspects. An additional challenge lay in determining whether the construction of the building should dictate the extent of freedom or the other way around. Making decisions regarding the degree of adaptability was a big struggle since there existed no pre-established guideline on how or when to make such choices.